

AMENDMENTS TO THE SEQUENCE LISTING

IN THE SEQUENCE LISTING

Please replace the Sequence Listing of record with the Substitute Sequence Listing enclosed herewith.

SEQUENCE LISTING

<110> EKSTROM, Tomas J. et al.

<120> COMPOUNDS FOR ENHANCED CANCER THERAPY

<130> 2836-0163PUS1

<140> US 10/588,379

<141> 2006-08-02

<160> 17

<170> PatentIn version 3.4

<210> 1

<211> 376

<212> PRT

<213> Herpes simplex virus

<400> 1

Met Ala Ser Tyr Pro Gly His Gln His Ala Ser Ala Phe Asp Gln Ala
1 5 10 15

Ala Arg Ser Arg Gly His Ser Asn Arg Arg Thr Ala Leu Arg Pro Arg
20 25 30

Arg Gln Gln Glu Ala Thr Glu Val Arg Pro Glu Gln Lys Met Pro Thr
35 40 45

Leu Leu Arg Val Tyr Ile Asp Gly Pro His Gly Met Gly Lys Thr Thr
50 55 60

Thr Thr Gln Leu Leu Val Ala Leu Gly Ser Arg Asp Asp Ile Val Tyr
65 70 75 80

Val Pro Glu Pro Met Thr Tyr Trp Arg Val Leu Gly Ala Ser Glu Thr
85 90 95

Ile Ala Asn Ile Tyr Thr Thr Gln His Arg Leu Asp Gln Gly Glu Ile
100 105 110

Ser Ala Gly Asp Ala Ala Val Val Met Thr Ser Ala Gln Ile Thr Met
115 120 125

Gly Met Pro Tyr Ala Val Thr Asp Ala Val Leu Ala Pro His Ile Gly
130 135 140

Gly Glu Ala Gly Ser Ser His Ala Pro Pro Pro Ala Leu Thr Leu Ile
 145 150 155 160

Phe Asp Arg His Pro Ile Ala Ala Leu Leu Cys Tyr Pro Ala Ala Arg
 165 170 175

Tyr Leu Met Gly Ser Met Thr Pro Gln Ala Val Leu Ala Phe Val Ala
 180 185 190

Leu Ile Pro Pro Thr Leu Pro Gly Thr Asn Ile Val Leu Gly Ala Leu
 195 200 205

Pro Glu Asp Arg His Ile Asp Arg Leu Ala Lys Arg Gln Arg Pro Gly
 210 215 220

Glu Arg Leu Asp Leu Ala Met Leu Ala Ala Ile Arg Arg Val Tyr Gly
 225 230 235 240

Leu Leu Ala Asn Thr Val Arg Tyr Leu Gln Cys Gly Gly Ser Trp Arg
 245 250 255

Glu Asp Trp Gly Gln Leu Ser Gly Thr Ala Val Pro Pro Gln Gly Ala
 260 265 270

Glu Pro Gln Ser Asn Ala Gly Pro Arg Pro His Ile Gly Asp Thr Leu
 275 280 285

Phe Thr Leu Phe Arg Ala Pro Glu Leu Leu Ala Pro Asn Gly Asp Leu
 290 295 300

Tyr Asn Val Phe Ala Trp Ala Leu Asp Val Leu Ala Lys Arg Leu Arg
 305 310 315 320

Ser Met His Val Phe Ile Leu Asp Tyr Asp Gln Ser Pro Ala Gly Cys
 325 330 335

Arg Asp Ala Leu Leu Gln Leu Thr Ser Gly Met Val Gln Thr His Val
 340 345 350

Thr Thr Pro Gly Ser Ile Pro Thr Ile Cys Asp Leu Ala Arg Thr Phe
 355 360 365

Ala Arg Glu Met Gly Glu Ala Asn
 370 375

<210> 2
 <211> 250
 <212> PRT
 <213> Drosophila melanogaster

<400> 2

Met Ala Glu Ala Ala Ser Cys Ala Arg Lys Gly Thr Lys Tyr Ala Glu
 1 5 10 15

Gly Thr Gln Pro Phe Thr Val Leu Ile Glu Gly Asn Ile Gly Ser Gly
 20 25 30

Lys Thr Thr Tyr Leu Asn His Phe Glu Lys Tyr Lys Asn Asp Ile Cys
 35 40 45

Leu Leu Thr Glu Pro Val Glu Lys Trp Arg Asn Val Asn Gly Val Asn
 50 55 60

Leu Leu Glu Leu Met Tyr Lys Asp Pro Lys Lys Trp Ala Met Pro Phe
 65 70 75 80

Gln Ser Tyr Val Thr Leu Thr Met Leu Gln Ser His Thr Ala Pro Thr
 85 90 95

Asn Lys Lys Leu Lys Ile Met Glu Arg Ser Ile Phe Ser Ala Arg Tyr
 100 105 110

Cys Phe Val Glu Asn Met Arg Arg Asn Gly Ser Leu Glu Gln Gly Met
 115 120 125

Tyr Asn Thr Leu Glu Glu Trp Tyr Lys Phe Ile Glu Glu Ser Ile His
 130 135 140

Val Gln Ala Asp Leu Ile Ile Tyr Leu Arg Thr Ser Pro Glu Val Ala
 145 150 155 160

Tyr Glu Arg Ile Arg Gln Arg Ala Arg Ser Glu Glu Ser Cys Val Pro
 165 170 175

Leu Lys Tyr Leu Gln Glu Leu His Glu Leu His Glu Asp Trp Leu Ile
 180 185 190

His Gln Arg Arg Pro Gln Ser Cys Lys Val Leu Val Leu Asp Ala Asp
 195 200 205

Leu Asn Leu Glu Asn Ile Gly Thr Glu Tyr Gln Arg Ser Glu Ser Ser
 210 215 220

Ile Phe Asp Ala Ile Ser Ser Asn Gln Gln Pro Ser Pro Val Leu Val
 225 230 235 240

Ser Pro Ser Lys Arg Gln Arg Val Ala Arg
 245 250

<210> 3

<211> 234

<212> PRT

<213> Lycopersicon esculentum

<400> 3

Met Ala Phe Ser Ser Ser Ala Arg Asn Pro Val Asp Leu Arg Asn Gly
 1 5 10 15

Ser Lys Asn Ser Phe Cys Pro Val Gly Glu Ile His Val Ile Val Gly
 20 25 30

Pro Met Phe Ala Gly Lys Thr Thr Ala Leu Leu Arg Arg Val Asn Leu
 35 40 45

Glu Ser Asn Asp Gly Arg Asn Val Val Leu Ile Lys Ser Ser Lys Asp
 50 55 60

Ala Arg Tyr Ala Val Asp Ala Val Val Thr His Asp Gly Thr Arg Phe
 65 70 75 80

Pro Cys Trp Ser Leu Pro Asp Leu Ser Ser Phe Lys Gln Arg Phe Gly
 85 90 95

Lys Asp Ala Tyr Glu Lys Val Asp Val Ile Gly Ile Asp Glu Ala Gln
 100 105 110

Phe Phe Gly Asp Leu Tyr Glu Phe Cys Cys Asn Ala Ala Asp Phe Asp
 115 120 125

Gly Lys Ile Ile Val Val Ala Gly Leu Asp Gly Asp Tyr Leu Arg Lys
 130 135 140

Ser Phe Gly Ser Val Leu Asp Ile Ile Pro Leu Ala Asp Thr Val Thr
 145 150 155 160

Lys Leu Thr Ala Arg Cys Glu Leu Cys Asn Arg Arg Ala Phe Phe Thr
 165 170 175

Phe Arg Lys Thr Asn Glu Thr Glu Thr Glu Leu Ile Gly Gly Ala Asp
 180 185 190

Ile Tyr Met Pro Val Cys Arg Gln His Tyr Val Asn Gly Gln Ser Val
 195 200 205

Asn Glu Ser Ala Lys Met Val Leu Glu Ser His Lys Val Ser Asn Glu
 210 215 220

Leu Ile Leu Glu Ser Pro Leu Val Asp Pro
 225 230

<210> 4
 <211> 361
 <212> PRT
 <213> Arabidopsis thaliana

<400> 4

Met Val Asp Tyr Leu Arg Ser Ser Val Gly Ile Ile His Arg Asn His
 1 5 10 15

Ala Glu Ser Ile Thr Thr Phe Ile Lys Glu Ser Val Asp Asp Glu Leu
 20 25 30

Lys Asp Ser Gly Pro Glu Pro Asn Leu Asn Val Lys Lys Arg Leu Thr
 35 40 45

Phe Cys Val Glu Gly Asn Ile Ser Val Gly Lys Ser Thr Phe Leu Gln
 50 55 60

Arg Ile Ala Asn Glu Thr Val Glu Leu Gln Asp Leu Val Glu Ile Val
 65 70 75 80

Pro Glu Pro Val Asp Lys Trp Gln Asp Val Gly Pro Asp His Phe Asn
 85 90 95

Ile Leu Asp Ala Phe Tyr Ser Glu Pro Gln Arg Tyr Ala Tyr Thr Phe
100 105 110

Gln Asn Tyr Val Phe Val Thr Arg Leu Met Gln Glu Lys Glu Ser Ala
115 120 125

Ser Gly Val Lys Pro Leu Arg Leu Met Glu Arg Ser Val Phe Ser Asp
130 135 140

Arg Met Val Phe Val Arg Ala Val His Glu Ala Lys Trp Met Asn Glu
145 150 155 160

Met Glu Ile Ser Ile Tyr Asp Ser Trp Phe Asp Pro Val Val Ser Ser
165 170 175

Leu Pro Gly Leu Val Pro Asp Gly Phe Ile Tyr Leu Arg Ala Ser Pro
180 185 190

Asp Thr Cys His Lys Arg Met Met Leu Arg Lys Arg Ala Glu Glu Gly
195 200 205

Gly Val Ser Leu Lys Tyr Leu Gln Asp Leu His Glu Lys His Glu Ser
210 215 220

Trp Leu Leu Pro Phe Glu Ser Gly Asn His Gly Val Leu Ser Val Ser
225 230 235 240

Arg Pro Ser Leu His Met Asp Asn Ser Leu His Pro Asp Ile Lys Asp
245 250 255

Arg Val Phe Tyr Leu Glu Gly Asn His Met His Ser Ser Ile Gln Lys
260 265 270

Val Pro Ala Leu Val Leu Asp Cys Glu Pro Asn Ile Asp Phe Ser Arg
275 280 285

Asp Ile Glu Ala Lys Thr Gln Tyr Ala Arg Gln Val Ala Glu Phe Phe
290 295 300

Glu Phe Val Lys Lys Lys Gln Glu Thr Ser Thr Glu Lys Ser Asn Ser
305 310 315 320

Gln Ser Pro Val Leu Leu Pro His Gln Asn Gly Gly Leu Trp Met Gly
 325 330 335

Pro Ala Gly Asn His Val Pro Gly Leu Asp Leu Pro Pro Leu Asp Leu
 340 345 350

Lys Ser Leu Leu Thr Arg Pro Ser Ala
 355 360

<210> 5
 <211> 250
 <212> PRT
 <213> Drosophila melanogaster
 <400> 5

Met Ala Glu Ala Ala Ser Cys Ala Arg Lys Gly Thr Lys Tyr Ala Glu
 1 5 10 15

Gly Thr Gln Pro Phe Thr Val Leu Ile Glu Gly Asn Ile Gly Ser Gly
 20 25 30

Lys Thr Thr Tyr Leu Asn His Phe Glu Lys Tyr Lys Asn Asp Ile Cys
 35 40 45

Leu Leu Thr Glu Pro Val Glu Lys Trp Arg Asn Val Asn Gly Val Asn
 50 55 60

Leu Leu Glu Leu Met Tyr Lys Asp Pro Lys Lys Trp Ala Met Pro Phe
 65 70 75 80

Gln Ser Tyr Ala Thr Leu Thr Met Leu Gln Ser His Thr Ala Pro Thr
 85 90 95

Asn Lys Lys Leu Lys Ile Met Glu Arg Ser Ile Phe Ser Ala Arg Tyr
 100 105 110

Cys Phe Val Glu Asn Met Arg Arg Asn Gly Ser Leu Glu Gln Gly Met
 115 120 125

Tyr Asn Thr Leu Glu Glu Trp Tyr Lys Phe Ile Glu Glu Ser Ile His
 130 135 140

Val Gln Ala Asp Leu Ile Ile Tyr Leu Arg Thr Ser Pro Glu Val Ala

145 150 155 160
 Tyr Glu Arg Ile Arg Gln Arg Ala Arg Ser Glu Glu Ser Cys Val Pro
 165 170 175
 Leu Lys Tyr Leu Gln Glu Leu His Glu Leu His Glu Asp Trp Leu Ile
 180 185 190
 His Gln Arg Arg Pro Gln Ser Cys Lys Val Leu Val Leu Asp Ala Asp
 195 200 205
 Leu Asp Leu Glu Asn Ile Gly Thr Glu Tyr Gln Arg Ser Glu Ser Ser
 210 215 220
 Ile Phe Asp Ala Ile Ser Ser Asn Gln Gln Pro Ser Pro Val Pro Val
 225 230 235 240
 Ser Pro Ser Lys Arg Gln Arg Val Ala Arg
 245 250

 <210> 6
 <211> 580
 <212> PRT
 <213> Arabidopsis thaliana

 <400> 6

 Met Gln Lys Ile Leu Cys Lys Ser Thr Thr Ser Ser Thr Pro Val Leu
 1 5 10 15

 Ser Thr Pro Val Asn Ser Leu Ala Ala Gly Phe Ile Ser Leu Gly Phe
 20 25 30

 Lys Thr Pro Val Lys Asn Leu Pro Pro Cys Ser Thr Thr Lys Pro Leu
 35 40 45

 Ser Thr Cys Phe Phe Ser Thr Ser Ala Met Pro Thr Thr Thr Ala Ser
 50 55 60

 Val Ser Ser Gly Gly Val Gly Phe Ser Ala Tyr Leu Gln Arg Thr Val
 65 70 75 80

 His Lys Pro Ala Pro Ala Ser Val Arg Phe Ser Thr Ala Gly Tyr Arg
 85 90 95

Thr Cys Arg Cys Ser Ile Asp Gly Thr Asn Arg Ala Trp Val Gly Arg
100 105 110

Thr Gly Ser Trp Arg Ala Leu Phe Cys Ser Asp Ser Thr Gly Gly Leu
115 120 125

Thr Pro Val Asn Ala Thr Ala Gly Ala Val Val Glu Ser Glu Glu Glu
130 135 140

Ser Asp Gly Glu Asp Glu Asp Glu Glu Lys Asp Glu Lys Pro Val Arg
145 150 155 160

Met Asn Arg Arg Asn Arg Ser Ser Ser Gly Ser Gly Glu Phe Val Gly
165 170 175

Asn Pro Asp Leu Leu Lys Ile Pro Gly Val Gly Leu Arg Asn Gln Arg
180 185 190

Lys Leu Val Asp Asn Gly Ile Gly Asp Val Ala Glu Leu Lys Lys Leu
195 200 205

Tyr Lys Asp Lys Phe Trp Lys Ala Ser Gln Lys Met Val Asp Tyr Leu
210 215 220

Arg Ser Ser Val Gly Ile Ile His Arg Asn His Ala Glu Ser Ile Thr
225 230 235 240

Thr Phe Ile Lys Glu Ser Val Asp Asp Glu Leu Lys Asp Ser Gly Pro
245 250 255

Glu Pro Asn Leu Asn Val Lys Lys Arg Leu Thr Phe Cys Val Glu Gly
260 265 270

Asn Ile Ser Val Gly Lys Ser Thr Phe Leu Gln Arg Ile Ala Asn Glu
275 280 285

Thr Val Glu Leu Gln Asp Leu Val Glu Ile Val Pro Glu Pro Val Asp
290 295 300

Lys Trp Gln Asp Val Gly Pro Asp His Phe Asn Ile Leu Asp Ala Phe
305 310 315 320

Tyr Ser Glu Pro Gln Arg Tyr Ala Tyr Thr Phe Gln Asn Tyr Val Phe
325 330 335

Val Thr Arg Leu Met Gln Glu Lys Glu Ser Ala Ser Gly Val Lys Pro
340 345 350

Leu Arg Leu Met Glu Arg Ser Val Phe Ser Asp Arg Met Val Phe Val
355 360 365

Arg Ala Val His Glu Ala Lys Trp Met Asn Glu Met Glu Ile Ser Ile
370 375 380

Tyr Asp Ser Trp Phe Asp Pro Val Val Ser Ser Leu Pro Gly Leu Val
385 390 395 400

Pro Asp Gly Phe Ile Tyr Leu Arg Ala Ser Pro Asp Thr Cys His Lys
405 410 415

Arg Met Met Leu Arg Lys Arg Ala Glu Glu Gly Gly Val Ser Leu Lys
420 425 430

Tyr Leu Gln Asp Leu His Glu Lys His Glu Ser Trp Leu Leu Pro Phe
435 440 445

Glu Ser Gly Asn His Gly Val Leu Ser Val Ser Arg Pro Ser Leu His
450 455 460

Met Asp Asn Ser Leu His Pro Asp Ile Lys Asp Arg Val Phe Tyr Leu
465 470 475 480

Glu Gly Asn His Met His Ser Ser Ile Gln Lys Val Pro Ala Leu Val
485 490 495

Leu Asp Cys Glu Pro Asn Ile Asp Phe Ser Arg Asp Ile Glu Ala Lys
500 505 510

Thr Gln Tyr Ala Arg Gln Val Ala Glu Phe Phe Glu Phe Val Lys Lys
515 520 525

Lys Gln Glu Thr Ser Thr Glu Lys Ser Asn Ser Gln Ser Pro Val Leu
530 535 540

Leu Pro His Gln Asn Gly Gly Leu Trp Met Gly Pro Ala Gly Asn His

545 550 555 560
 Val Pro Gly Leu Asp Leu Pro Pro Leu Asp Leu Lys Ser Leu Leu Thr
 565 570 575

 Arg Pro Ser Ala
 580

 <210> 7
 <211> 300
 <212> PRT
 <213> Oryza sativa

 <400> 7

 Met Val Glu Phe Leu Gln Ser Ser Val Gly Ile Ile His Lys Asn His
 1 5 10 15

 Ala Glu Ser Ile Thr Leu Phe Ile Lys Glu Ser Val Asp Glu Glu Leu
 20 25 30

 Lys Gly Thr Asp Ser Pro Asn Val Ser Lys Asn Lys Arg Leu Thr Phe
 35 40 45

 Cys Val Glu Gly Asn Ile Ser Val Gly Lys Thr Thr Phe Leu Gln Arg
 50 55 60

 Ile Ala Asn Glu Thr Ile Glu Leu Arg Asp Leu Val Glu Ile Val Pro
 65 70 75 80

 Glu Pro Ile Ala Lys Trp Gln Asp Val Gly Pro Asp His Phe Asn Ile
 85 90 95

 Leu Asp Ala Phe Tyr Ala Glu Pro Gln Arg Tyr Ala Tyr Thr Phe Gln
 100 105 110

 Asn Tyr Val Phe Val Thr Arg Val Met Gln Glu Lys Glu Ser Ser Ser
 115 120 125

 Gly Ile Lys Pro Leu Arg Leu Met Glu Arg Ser Val Phe Ser Asp Arg
 130 135 140

 Met Val Val Lys Phe Leu Lys Val Phe Val Arg Ala Val His Glu Ala
 145 150 155 160

Asn Trp Met Asn Glu Met Glu Ile Ser Ile Tyr Asp Ser Trp Phe Asp
165 170 175

Pro Val Val Ser Ser Leu Pro Gly Leu Ile Pro Asp Gly Phe Ile Tyr
180 185 190

Leu Arg Ala Ser Pro Asp Thr Cys His Lys Arg Met Met Val Arg Lys
195 200 205

Arg Ser Glu Glu Gly Gly Val Thr Leu Asp Tyr Leu Arg Gly Leu His
210 215 220

Glu Lys His Glu Ser Trp Leu Leu Pro Ser Lys Gly Gln Gly Pro Gly
225 230 235 240

Val Leu Ser Val Ser Gln Val Pro Val His Met Glu Gly Ser Leu Pro
245 250 255

Pro Asp Ile Arg Glu Arg Val Phe Tyr Leu Glu Gly Asp His Met His
260 265 270

Ser Ser Ile Gln Lys Val Pro Ala Leu Val Leu Asp Cys Glu His Asp
275 280 285

Ile Asp Phe Asn Lys Asp Ile Glu Ala Lys Arg Gln
290 295 300

<210> 8
<211> 260
<212> PRT
<213> Homo sapiens

<400> 8

Met Ala Thr Pro Pro Lys Arg Ser Cys Pro Ser Phe Ser Ala Ser Ser
1 5 10 15

Glu Gly Thr Arg Ile Lys Lys Ile Ser Ile Glu Gly Asn Ile Ala Ala
20 25 30

Gly Lys Ser Thr Phe Val Asn Ile Leu Lys Gln Leu Cys Glu Asp Trp
35 40 45

Glu Val Val Pro Glu Pro Val Ala Arg Trp Cys Asn Val Gln Ser Thr

50

55

60

Gln Asp Glu Phe Glu Glu Leu Thr Met Ser Gln Lys Asn Gly Gly Asn
65 70 75 80

Val Leu Gln Met Met Tyr Glu Lys Pro Glu Arg Trp Ser Phe Thr Phe
85 90 95

Gln Thr Tyr Ala Cys Leu Ser Arg Ile Arg Ala Gln Leu Ala Ser Leu
100 105 110

Asn Gly Lys Leu Lys Asp Ala Glu Lys Pro Val Leu Phe Phe Glu Arg
115 120 125

Ser Val Tyr Ser Asp Arg Tyr Ile Phe Ala Ser Asn Leu Tyr Glu Ser
130 135 140

Glu Cys Met Asn Glu Thr Glu Trp Thr Ile Tyr Gln Asp Trp His Asp
145 150 155 160

Trp Met Asn Asn Gln Phe Gly Gln Ser Leu Glu Leu Asp Gly Ile Ile
165 170 175

Tyr Leu Gln Ala Thr Pro Glu Thr Cys Leu His Arg Ile Tyr Leu Arg
180 185 190

Gly Arg Asn Glu Glu Gln Gly Ile Pro Leu Glu Tyr Leu Glu Lys Leu
195 200 205

His Tyr Lys His Glu Ser Trp Leu Leu His Arg Thr Leu Lys Thr Asn
210 215 220

Phe Asp Tyr Leu Gln Glu Val Pro Ile Leu Thr Leu Asp Val Asn Glu
225 230 235 240

Asp Phe Lys Asp Lys Tyr Glu Ser Leu Val Glu Lys Val Lys Glu Phe
245 250 255

Leu Ser Thr Leu
260

<210> 9

<211> 277

<212> PRT
<213> Homo sapiens

<400> 9

Met Ala Ala Gly Arg Leu Phe Leu Ser Arg Leu Arg Ala Pro Phe Ser
1 5 10 15

Ser Met Ala Lys Ser Pro Leu Glu Gly Val Ser Ser Ser Arg Gly Leu
20 25 30

His Ala Gly Arg Gly Pro Arg Arg Leu Ser Ile Glu Gly Asn Ile Ala
35 40 45

Val Gly Lys Ser Thr Phe Val Lys Leu Leu Thr Lys Thr Tyr Pro Glu
50 55 60

Trp His Val Ala Thr Glu Pro Val Ala Thr Trp Gln Asn Ile Gln Ala
65 70 75 80

Ala Gly Asn Gln Lys Ala Cys Thr Ala Gln Ser Leu Gly Asn Leu Leu
85 90 95

Asp Met Met Tyr Arg Glu Pro Ala Arg Trp Ser Tyr Thr Phe Gln Thr
100 105 110

Phe Ser Phe Leu Ser Arg Leu Lys Val Gln Leu Glu Pro Phe Pro Glu
115 120 125

Lys Leu Leu Gln Ala Arg Lys Pro Val Gln Ile Phe Glu Arg Ser Val
130 135 140

Tyr Ser Asp Arg Tyr Ile Phe Ala Lys Asn Leu Phe Glu Asn Gly Ser
145 150 155 160

Leu Ser Asp Ile Glu Trp His Ile Tyr Gln Asp Trp His Ser Phe Leu
165 170 175

Leu Trp Glu Phe Ala Ser Arg Ile Thr Leu His Gly Phe Ile Tyr Leu
180 185 190

Gln Ala Ser Pro Gln Val Cys Leu Lys Arg Leu Tyr Gln Arg Ala Arg
195 200 205

Glu Glu Glu Lys Gly Ile Glu Leu Ala Tyr Leu Glu Gln Leu His Gly
 210 215 220

Gln His Glu Ala Trp Leu Ile His Lys Thr Thr Lys Leu His Phe Glu
 225 230 235 240

Ala Leu Met Asn Ile Pro Val Leu Val Leu Asp Val Asn Asp Asp Phe
 245 250 255

Ser Glu Glu Val Thr Lys Gln Glu Asp Leu Met Arg Glu Val Asn Thr
 260 265 270

Phe Val Lys Asn Leu
 275

<210> 10
 <211> 234
 <212> PRT
 <213> Homo sapiens

<400> 10

Met Gly Ala Phe Cys Gln Arg Pro Ser Ser Asp Lys Glu Gln Glu Lys
 1 5 10 15

Glu Lys Lys Ser Val Ile Cys Val Glu Gly Asn Ile Ala Gly Gly Lys
 20 25 30

Thr Thr Cys Leu Glu Phe Phe Ser Asn Ala Thr Asp Val Glu Val Leu
 35 40 45

Thr Glu Pro Val Ser Lys Trp Arg Asn Val Arg Gly His Asn Pro Leu
 50 55 60

Gly Leu Met Tyr His Asp Ala Ser Arg Trp Gly Leu Thr Leu Gln Thr
 65 70 75 80

Tyr Val Gln Leu Thr Met Leu Asp Arg His Thr Arg Pro Gln Val Ser
 85 90 95

Ser Val Arg Leu Met Glu Arg Ser Ile His Ser Ala Arg Tyr Ile Phe
 100 105 110

Val Glu Asn Leu Tyr Arg Ser Gly Lys Met Pro Glu Val Asp Tyr Val
 115 120 125

Val Leu Ser Glu Trp Phe Asp Trp Ile Leu Arg Asn Met Asp Val Ser
 130 135 140

Val Asp Leu Ile Val Tyr Leu Arg Thr Asn Pro Glu Thr Cys Tyr Gln
 145 150 155 160

Arg Leu Lys Lys Arg Cys Arg Glu Glu Glu Lys Val Ile Pro Leu Glu
 165 170 175

Tyr Leu Glu Ala Ile His His Leu His Glu Glu Trp Leu Ile Lys Gly
 180 185 190

Ser Leu Phe Pro Met Ala Ala Pro Val Leu Val Ile Glu Ala Asp His
 195 200 205

His Met Glu Arg Met Leu Glu Leu Phe Glu Gln Asn Arg Asp Arg Ile
 210 215 220

Leu Thr Pro Glu Asn Arg Lys His Cys Pro
 225 230

<210> 11
 <211> 234
 <212> PRT
 <213> Homo sapiens

<400> 11

Met Ser Cys Ile Asn Leu Pro Thr Val Leu Pro Gly Ser Pro Ser Lys
 1 5 10 15

Thr Arg Gly Gln Ile Gln Val Ile Leu Gly Pro Met Phe Ser Gly Lys
 20 25 30

Ser Thr Glu Leu Met Arg Arg Val Arg Arg Phe Gln Ile Ala Gln Tyr
 35 40 45

Lys Cys Leu Val Ile Lys Tyr Ala Lys Asp Thr Arg Tyr Ser Ser Ser
 50 55 60

Phe Cys Thr His Asp Arg Asn Thr Met Glu Ala Leu Pro Ala Cys Leu
 65 70 75 80

Leu Arg Asp Val Ala Gln Glu Ala Leu Gly Val Ala Val Ile Gly Ile
85 90 95

Asp Glu Gly Gln Phe Phe Pro Asp Ile Met Glu Phe Cys Glu Ala Met
100 105 110

Ala Asn Ala Gly Lys Thr Val Ile Val Ala Ala Leu Asp Gly Thr Phe
115 120 125

Gln Arg Lys Pro Phe Gly Ala Ile Leu Asn Leu Val Pro Leu Ala Glu
130 135 140

Ser Val Val Lys Leu Thr Ala Val Cys Met Glu Cys Phe Arg Glu Ala
145 150 155 160

Ala Tyr Thr Lys Arg Leu Gly Thr Glu Lys Glu Val Glu Val Ile Gly
165 170 175

Gly Ala Asp Lys Tyr His Ser Val Cys Arg Leu Cys Tyr Phe Lys Lys
180 185 190

Ala Ser Gly Gln Pro Ala Gly Pro Asp Asn Lys Glu Asn Cys Pro Val
195 200 205

Pro Gly Lys Pro Gly Glu Ala Val Ala Ala Arg Lys Leu Phe Ala Pro
210 215 220

Gln Gln Ile Leu Gln Cys Ser Pro Ala Asn
225 230

<210> 12
<211> 248
<212> PRT
<213> Bombyx mori

<400> 12

Met Ser Ala Asn Asn Val Lys Pro Phe Thr Val Phe Val Glu Gly Asn
1 5 10 15

Ile Gly Ser Gly Lys Thr Thr Phe Leu Glu His Phe Arg Gln Phe Glu
20 25 30

Asp Ile Thr Leu Leu Thr Glu Pro Val Glu Met Trp Arg Asp Leu Lys
35 40 45

Gly Cys Asn Leu Leu Glu Leu Met Tyr Lys Asp Pro Glu Lys Trp Ala
 50 55 60

Met Thr Phe Gln Ser Tyr Val Ser Leu Thr Met Leu Asp Met His Arg
 65 70 75 80

Arg Pro Ala Pro Thr Pro Val Lys Leu Met Glu Arg Ser Leu Phe Ser
 85 90 95

Ala Arg Tyr Cys Phe Val Glu His Ile Met Arg Asn Asn Thr Leu His
 100 105 110

Pro Ala Gln Phe Ala Val Leu Asp Glu Trp Phe Arg Phe Ile Gln His
 115 120 125

Asn Ile Pro Ile Asp Ala Asp Leu Ile Val Tyr Leu Lys Thr Ser Pro
 130 135 140

Ser Ile Val Tyr Gln Arg Ile Lys Lys Arg Ala Arg Ser Glu Glu Gln
 145 150 155 160

Cys Val Pro Leu Ser Tyr Ile Glu Glu Leu His Arg Leu His Glu Asp
 165 170 175

Trp Leu Ile Asn Arg Ile His Ala Glu Cys Pro Ala Pro Val Leu Val
 180 185 190

Leu Asp Ala Asp Leu Asp Leu Ser Gln Ile Thr Asp Glu Tyr Lys Arg
 195 200 205

Ser Glu His Gln Ile Leu Arg Lys Ala Val Asn Val Val Met Ser Ser
 210 215 220

Pro Asn Lys His Ser Pro Lys Lys Pro Ile Ser Thr Thr Pro Ile Lys
 225 230 235 240

Ile Thr Pro His Met Arg Ile Leu
 245

<210> 13
 <211> 246
 <212> PRT

<213> Anopheles gambiae

<400> 13

Met Pro Pro Ile Ala Ser Glu Lys Leu Gly Ala Ser Gly Lys Lys Pro
1 5 10 15

Phe Thr Val Phe Val Glu Gly Asn Ile Gly Ser Gly Lys Thr Thr Phe
20 25 30

Leu Asn His Phe Gln Lys Phe Asn Asp Ile Cys Leu Leu Thr Glu Pro
35 40 45

Val Glu Lys Trp Arg Asn Cys Gly Gly Val Asn Leu Leu Asp Leu Met
50 55 60

Tyr Lys Glu Ser His Arg Trp Ala Met Pro Phe Gln Thr Tyr Val Thr
65 70 75 80

Leu Thr Met Leu Asp Met His Thr Cys Gln Thr Asp Lys Ser Val Lys
85 90 95

Leu Met Glu Arg Ser Leu Phe Ser Ala Arg Asn Cys Phe Val Glu Ser
100 105 110

Met Leu Ala Ser Gly Ser Leu His Gln Gly Met Tyr Asn Val Leu Gln
115 120 125

Glu Trp Tyr Asp Phe Ile Cys Cys Asn Ile His Ile Gln Ala Asp Leu
130 135 140

Ile Val Tyr Leu Gln Thr Ser Pro Glu Val Val Tyr Glu Arg Met Lys
145 150 155 160

Gln Arg Ala Arg Ser Glu Glu Ser Cys Val Pro Leu Glu Tyr Leu Lys
165 170 175

Glu Leu His Glu Leu His Glu Asn Trp Leu Ile His Gly Ala Ser Pro
180 185 190

Arg Pro Ala Pro Val Leu Val Leu Asn Ala Asp Leu Asp Leu Asn Thr
195 200 205

Ile Gly Ala Glu Tyr Glu Arg Ser Glu Thr Ser Ile Leu Lys Pro Ile

210

215

220

Leu Ile Glu Asn Thr Asn Gln His Ala Ile Leu Thr Ser Pro Ala Lys
 225 230 235 240

Arg Ala Lys Thr Asp Phe
 245

<210> 14
 <211> 276
 <212> PRT
 <213> Oryza sativa

<400> 14

Met Ser Ser Ile Cys Ala Met Arg Ser Leu Leu Ala Ala Ser Thr Phe
 1 5 10 15

Leu Arg Ser Gly Ala Ser Pro Leu Leu Arg Pro Leu Ser Arg Pro Leu
 20 25 30

Pro Ser Arg Leu Asn Leu Ser Arg Phe Gly Pro Val Arg Pro Val Ser
 35 40 45

Ala Ala Ala Ala Ala Ala Asp Lys Ser Arg Gly Gly Gly Gly Ser Ala
 50 55 60

Met Glu Ala Gln Pro Ser Tyr Pro Gly Glu Ile His Val Ile Val Gly
 65 70 75 80

Pro Met Phe Ala Gly Lys Thr Thr Ala Leu Leu Arg Arg Val Gln Val
 85 90 95

Glu Ala Gly Thr Gly Arg Asn Val Ala Leu Ile Lys Ser Asp Lys Asp
 100 105 110

Asn Arg Tyr Gly Leu Asp Ser Val Val Thr His Asp Gly Thr Lys Met
 115 120 125

Pro Cys Trp Ala Leu Pro Glu Leu Ser Ser Phe Gln Asp Lys Leu Gly
 130 135 140

Thr Glu Ala Tyr Asp Lys Val Asp Val Ile Gly Ile Asp Glu Ala Gln
 145 150 155 160

Phe Phe Asp Asp Leu His Asp Phe Cys Cys Lys Ala Ala Asp Arg Asp
165 170 175

Gly Lys Ile Val Val Val Ala Gly Leu Asp Gly Asp Tyr Lys Arg Asn
180 185 190

Lys Phe Gly Ser Val Leu Asp Ile Ile Pro Leu Ala Asp Ser Val Thr
195 200 205

Lys Leu Thr Ala Arg Cys Glu Leu Cys Gly Arg Arg Ala Phe Phe Thr
210 215 220

Leu Arg Lys Thr Arg Glu Thr Lys Thr Glu Leu Ile Gly Gly Ala Asp
225 230 235 240

Val Tyr Met Pro Val Cys Arg Gln His Tyr Leu Asp Gly Gln Ile Val
245 250 255

Ile Glu Ala Thr Arg Ile Val Leu Asp Leu Glu Lys Ser Lys Val Ile
260 265 270

His Ala Phe Lys
275

<210> 15
<211> 238
<212> PRT
<213> Arabidopsis thaliana

<400> 15

Met Ala Thr Leu Lys Ala Ser Phe Leu Ile Lys Thr Leu Asp Ser Asp
1 5 10 15

Val Thr Gly Asp Phe Leu Ser Asp Leu Glu Arg Arg Gly Ser Gly Ala
20 25 30

Val His Val Ile Met Gly Pro Met Phe Ser Gly Lys Ser Thr Ser Leu
35 40 45

Leu Arg Arg Ile Lys Ser Glu Ile Ser Asp Gly Arg Ser Val Ala Met
50 55 60

Leu Lys Ser Ser Lys Asp Thr Arg Tyr Ala Lys Asp Ser Val Val Thr

65		70		75		80									
His	Asp	Gly	Ile	Gly	Phe	Pro	Cys	Trp	Ala	Leu	Pro	Asp	Leu	Met	Ser
				85					90					95	
Phe	Pro	Glu	Lys	Phe	Gly	Leu	Asp	Ala	Tyr	Asn	Lys	Leu	Asp	Val	Ile
			100					105					110		
Gly	Ile	Asp	Glu	Ala	Gln	Phe	Phe	Gly	Asp	Leu	Tyr	Glu	Phe	Cys	Cys
		115					120					125			
Lys	Val	Ala	Asp	Asp	Asp	Gly	Lys	Ile	Val	Ile	Val	Ala	Gly	Leu	Asp
	130					135					140				
Gly	Asp	Tyr	Leu	Arg	Arg	Ser	Phe	Gly	Ala	Val	Leu	Asp	Ile	Ile	Pro
145					150					155					160
Ile	Ala	Asp	Ser	Val	Thr	Lys	Leu	Thr	Ala	Arg	Cys	Glu	Val	Cys	Gly
				165					170					175	
His	Lys	Ala	Phe	Phe	Thr	Leu	Arg	Lys	Asn	Cys	Asp	Thr	Arg	Thr	Glu
			180					185					190		
Leu	Ile	Gly	Gly	Ala	Asp	Val	Tyr	Met	Pro	Val	Cys	Arg	Lys	His	Tyr
		195					200					205			
Ile	Thr	Asn	His	Ile	Val	Ile	Lys	Ala	Ser	Lys	Lys	Val	Leu	Glu	Asp
	210					215					220				
Ser	Asp	Lys	Ala	Arg	Ala	Glu	Ser	Cys	Val	Ala	Ala	Thr	Ile		
225					230					235					
<210>	16														
<211>	277														
<212>	PRT														
<213>	Arabidopsis thaliana														
<400>	16														
Met	Arg	Thr	Leu	Ile	Ser	Pro	Ser	Leu	Ala	Pro	Phe	Ser	Leu	His	Leu
1				5					10					15	
His	Lys	Pro	Ser	Leu	Phe	Ser	Thr	Ala	Leu	Arg	Phe	Ser	Phe	Ser	Ile
			20					25					30		

23

Leu Glu Thr Ala Arg Ala Val Leu Asp Ser Ser Asn Asn His Ser Val
 260 265 270

Val Ala Ser Ser Leu
 275

<210> 17
 <211> 365
 <212> PRT
 <213> Lycopersicon esculentum
 <400> 17

Met Val Glu Phe Leu Gln Ser Ser Ile Gly Ile Ile His Arg Asn His
 1 5 10 15

Ala Glu Ser Ile Thr Thr Tyr Ile Arg Lys Ser Val Asp Glu Glu Leu
 20 25 30

Lys Glu Asn Asn Ser Asp Ser Asn Val Lys Ser Thr Gln Lys Lys Arg
 35 40 45

Leu Thr Phe Cys Val Glu Gly Asn Ile Ser Val Gly Lys Thr Thr Phe
 50 55 60

Leu Gln Arg Ile Ala Asn Glu Thr Leu Glu Leu Gln Asp Leu Val Glu
 65 70 75 80

Ile Val Pro Glu Pro Ile Ala Lys Trp Gln Asp Ile Gly Pro Asp His
 85 90 95

Phe Asn Ile Leu Asp Ala Phe Tyr Ala Glu Pro Gln Arg Tyr Ala Tyr
 100 105 110

Thr Phe Gln Asn Tyr Val Phe Val Thr Arg Val Met Gln Glu Arg Glu
 115 120 125

Ser Ser Gly Gly Ile Arg Pro Leu Arg Leu Met Glu Arg Ser Val Phe
 130 135 140

Ser Asp Arg Met Val Phe Val Arg Ala Val His Glu Ala Asn Trp Met
 145 150 155 160

Asn Glu Met Glu Ile Ser Ile Tyr Asp Ser Trp Phe Asp Pro Val Val
 165 170 175

Ser Thr Leu Pro Gly Leu Ile Pro Asp Gly Phe Ile Tyr Leu Arg Ala
 180 185 190

Ser Pro Asp Thr Cys His Lys Arg Met Met Leu Arg Lys Arg Thr Glu
 195 200 205

Glu Gly Gly Val Ser Leu Glu Tyr Leu Arg Gly Leu His Glu Lys His
 210 215 220

Glu Ser Trp Leu Phe Pro Phe Glu Ser Gly Asn His Gly Val Leu Ser
 225 230 235 240

Val Ser Glu Leu Pro Leu Asn Phe Asp Lys Phe Cys Val Pro Pro Glu
 245 250 255

Ile Arg Asp Arg Val Phe Tyr Leu Glu Gly Asn His Met His Pro Ser
 260 265 270

Ile Gln Lys Val Pro Ala Leu Val Leu Asp Cys Glu Pro Asn Ile Asp
 275 280 285

Phe Asn Arg Asp Ile Glu Ala Lys Arg Gln Tyr Ala Arg Gln Val Ala
 290 295 300

Asp Phe Phe Glu Phe Val Lys Lys Lys Gln Glu Val Met Pro Gly Ala
 305 310 315 320

Gly Glu Glu Gln Pro Lys Gly Asn Gln Ala Pro Val Met Leu Pro Gln
 325 330 335

Asn Gly Gly Leu Trp Val Pro Gly Gly Lys Phe Ser Glu Ser Thr Leu
 340 345 350

Asn Leu Asp Phe Arg Arg Asn Met Ser Phe Met Ser His
 355 360 365

